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Gly Glu Val Gln Cys Trp Ala Leu Trp Pro Asp Asp Ser Tyr Trp Thr 195 200 205

Pro Tyr Met Thr Ile Val Ala Phe Leu Val Tyr Phe Ile Pro Leu Thr 210 215 220

Ile Ile Ser Ile Met Tyr Gly Ile Val Ile Arg Thr Ile Trp Ile Lys 225 230 235 240

Ser Lys Thr Tyr Glu Thr Val Ile Ser Asn Cys Ser Asp Gly Lys Leu 245 250 255

Cys Ser Ser Tyr Asn Arg Gly Leu Ile Ser Lys Ala Lys Ile Lys Ala 260 265 270

Ile Lys Tyr Ser Ile Ile Ile Ile Leu Ala Phe Ile Cys Cys Trp Ser 275 280 285

Pro Tyr Phe Leu Phe Asp Ile Leu Asp Asn Phe Asn Leu Leu Pro Asp 290 295 300

Thr Gln Glu Arg Phe Tyr Ala Ser Val Ile Ile Gln Asn Leu Pro Ala 305 310 315 320

Leu Asn Ser Ala Ile Asn Pro Leu Ile Tyr Cys Val Phe Ser Ser Ser 325 330 335

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Gly Val Pro Ser Trp Ala Leu Pro Arg 370 375	
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ggaggcaagc tggactccct cactcagctg caggagcaag gacagtgagg ctcaaccccg cctgagcc atg cca gcc aac ttc aca gag ggc agc ttc gat tcc agt ggg Met Pro Ala Asn Phe Thr Glu Gly Ser Phe Asp Ser Ser Gly 1	120 170 218 266
ggagctaggg agggctctgt gcctccgttc agcagagctg cagctgctgc ccagctctca ggaggcaagc tggactccct cactcagctg caggagcaag gacagtgagg ctcaaccccg cctgagcc atg cca gcc aac ttc aca gag ggc agc ttc gat tcc agt ggg	120 170 218 266

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tca Ser 255	aag Lys	gca Ala	aaa Lys	atc Ile	aag Lys 260	gct Ala	atc Ile	aag Lys	tat Tyr	agc Ser 265	atc Ile	atc Ile	atc Ile	att Ile	ctt Leu 270	938	3
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Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr Ser Phe
35 40 45

Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe Thr Ile 50 55 60

Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys Lys 65 70 75 80

Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Asp Ile Asn 85 90 95

Trp Arg Phe Thr Gly Asp Phe Thr Ala Pro Asp Leu Val Cys Arg Val

Val Arg Tyr Leu Gln Val Val Leu Leu Tyr Ala Ser Thr Tyr Val Leu 115 120 125

Val Ser Leu Ser Ile Asp Arg Tyr His Ala Ile Val Tyr Pro Met Lys 130 135 140

Phe Leu Gln Gly Glu Lys Gln Ala Arg Val Leu Ile Val Ile Ala Trp 150

Ser Leu Ser Phe Leu Phe Ser Ile Pro Thr Leu Ile Ile Phe Gly Lys 165 170

Arg Thr Leu Ser Asn Gly Glu Val Gln Cys Trp Ala Leu Trp Pro Asp

Asp Ser Tyr Trp Thr Pro Tyr Met Thr Ile Val Ala Phe Leu Val Tyr 200

Phe Ile Pro Leu Thr Ile Ile Ser Ile Met Tyr Gly Ile Val Ile Arg 215

Thr Ile Trp Ile Lys Ser Lys Thr Tyr Glu Thr Val Ile Ser Asn Cys 230 240

Ser Asp Gly Lys Leu Cys Ser Ser Tyr Asn Arg Gly Leu Ile Ser Lys 250

Ala Lys Ile Lys Ala Ile Lys Tyr Ser Ile Ile Ile Leu Ala Phe 260 265

Ile Cys Cys Trp Ser Pro Tyr Phe Leu Phe Asp Ile Leu Asp Asn Phe 275 280

Asn Leu Leu Pro Asp Thr Gln Glu Arg Phe Tyr Ala Ser Val Ile Ile 290 295

Gln Asn Leu Pro Ala Leu Asn Ser Ala Ile Asn Pro Leu Ile Tyr Cys 305

Val Phe Ser Ser Ser Ile Ser Phe Pro Cys Arg Val Ile Arg Leu Arg 325 330

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Lys Gly Thr Trp Pro Gly Val Pro Ser Trp Ala Leu Pro Arg 355

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acc ggg cag acg ctg gat tct tcc cca gtg gct tgc act gaa aca gtg Thr Gly Gln Thr Leu Asp Ser Ser Pro Val Ala Cys Thr Glu Thr Val 20 25 30	218
act ttt act gaa gtg gtg gaa gga aag gaa tgg ggt tcc ttc tac tac Thr Phe Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr 35 40 45	266
tcc ttt aag act gag caa ttg ata act ctg tgg gtc ctc ttt gtt ttt Ser Phe Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe 50 55 60	314
acc att gtt gga aac tcc gtt gtg ctt ttt tcc aca tgg agg aga aag Thr Ile Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys 65 70 75	362 ⁻
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Gln Thr Leu Asp Ser Ser Pro Val Ala Cys Thr Glu Thr Val Thr Phe
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Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr Ser Phe 35 40 45

Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe Thr Ile 50 55 60

Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys Lys 65 70 75 80

Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Val 85 90

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cctgagcc atg cca gcc aac ttc aca gag ggc agc ttc gat tcc agt ggg 170
Met Pro Ala Asn Phe Thr Glu Gly Ser Phe Asp Ser Ser Gly

10

5

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tcc ttt aag act gag caa ttg ata act ctg tgg gtc ctc ttt gtt ttt Ser Phe Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe 50 55 60	314
acc att gtt gga aac tcc gtt gtg ctt ttt tcc aca tgg agg aga aag Thr Ile Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys 65 70 75	362
aag aag tca aga atg acc ttc ttt gtg act cag ctg gcc atc aca ggt Lys Lys Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Gly 80 85 90	410
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ctc cat tcc cac cct gat cat att tgg gaa gag gac act gtc caa cgg Leu His Ser His Pro Asp His Ile Trp Glu Glu Asp Thr Val Gln Arg 145 150 155	602
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Gln Thr Leu Asp Ser Ser Pro Val Ala Cys Thr Glu Thr Val Thr Phe 20 25 30

Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr Ser Phe 35 40 45

Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe Thr Ile 50 55 60

Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys Lys 65 70 75 80

Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Gly Cys Ala 85 90 95

Ala Leu Arg Leu Tyr Leu Arg Pro Gly Val Pro Gln His Arg Gln Ile 100 105 110

Pro Cys His Arg Leu Pro His Glu Val Pro Ser Arg Arg Lys Ala Ser 115 120 125

Gln Gly Pro His Cys Asp Arg Leu Glu Pro Val Phe Ser Val Leu His 130 135 140

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<212> PRT

<213> Homo sapiens

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Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr Ser Phe 35 40 45

Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe Thr Ile 50 55 60

Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys Lys 65 70 75 80

Ser Arg Met	Thr	Phe	Phe	Val	Thr	Gln	Leu	Ala	Ile	Thr	Asp	Ser	Phe
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Thr Gly Leu Val Asn Ile Leu Thr Asp Ile Asn Trp Arg Phe Thr Gly
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acc ggg cag acg ctg gat tct tcc cca gtg gct tgc act gaa aca gtg Thr Gly Gln Thr Leu Asp Ser Ser Pro Val Ala Cys Thr Glu Thr Val 20 25 30	218
act ttt act gaa gtg gtg gaa gga aag gaa tgg ggt tcc ttc tac tac Thr Phe Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr 35 40 45	266
tcc ttt aag act gag caa ttg ata act ctg tgg gtc ctc ttt gtt ttt Ser Phe Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe 50 55 60	314
acc att gtt gga aac tcc gtt gtg ctt ttt tcc aca tgg agg aga aag Thr Ile Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys	362

aag aag tca aga atg acc ttc ttt gtg act cag ctg gcc atc aca gaa

Lys Lys Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Glu

410

91/111

85

80

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ttc Phe	tcc Ser	att Ile	ccc Pro	acc Thr 115	Leu	atc Ile	ata Ile	ttt Phe	999 120	Lys	agg Arg	aca Thr	ctg Leu	tcc Ser 125	aac Asn	506	
ggt Gly	gaa Glu	gtg Val	cag Gln 130	tgc Cys	tgg Trp	gcc Ala	ctg Leu	tgg Trp 135	Pro	gac Asp	gac Asp	tcc Ser	tac Tyr 140	tgg Trp	acc Thr	554	
cca Pro	tac Tyr	atg Met 145	acc Thr	atc Ile	gtg Val	gcc Ala	ttc Phe 150	ctg Leu	gtg Val	tac Tyr	ttc Phe	atc Ile 155	cct Pro	ctg Leu	aca Thr	602	
atc Ile	atc Ile 160	agc Ser	atc Ile	atg Met	tat Tyr	ggc Gly 165	att Ile	gtg Val	atc Ile	cga Arg	act Thr 170	att Ile	tgg Trp	att Ile	aaa Lys	650	
agc Ser 175	aaa Lys	acc Thr	tac Tyr	gaa Glu	aca Thr 180	gtg Val	att Ile	tcc Ser	aac Asn	tgc Cys 185	tca Ser	gat Asp	Gly 333	aaa Lys	ctg Leu 190	698	
tgc Cys	agc Ser	agc Ser	tat Tyr	aac Asn 195	cga Arg	gga Gly	ctc Leu	atc Ile	tca Ser 200	aag Lys	gca Ala	aaa Lys	atc Ile	aag Lys 205	gct Ala	746	
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acc Thr	cag Gln 240	gag Glu	cgt Arg	ttc Phe	tat Tyr	gcc Ala 245	tct Ser	gtg Val	atc Ile	att Ile	cag Gln 250	aac Asn	ctg Leu	cca Pro	gca Ala	890	
ttg Leu 255	aat Asn	agt Ser	gcc Ala	atc Ile	aac Asn 260	ccc Pro	ctc Leu	atc Ile	tac Tyr	tgt Cys 265	gtc Val	ttc Phe	agc Ser,	agc Ser	tcc Ser 270	938	
atc Ile	tct Ser	ttc Phe	ccc Pro	tgc Cys 275	agg Arg	gag Glu	caa Gln	aga Arg	tca Ser 280	cag Gln	gat Asp	tcc Ser	aga Arg	atg Met 285	acg Thr	986	
ttc Phe	cgg Arg	gag Glu	aga Arg 290	act Thr	gag Glu	agg Arg	cat His	gag Glu 295	atg Met	cag Gln	att Ile	ctg Leu	tcc Ser 300	aag Lys	cca Pro	1034	
gaa Glu	Phe	atc Ile 305	taga	ccct	ag g	gcag	tgcc	a gt	gcta	ggct	gag	jcacc	atc			1083	
agct	ctcc	ca g	gtcc	ttgt	c ac	ctgc	ttgg	gca	cgtg	cat	ggaa	.cccg	ag c	caac	ttcac	1143	
ccca	ccct	cg t	catt	acct	a aa	agat	gcac	aag	acaa	atg	ttct	aatg	ac t	gcat	gcact	1203	

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						_		1263
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Thr Glu Val	Val Glu Gly	Lys Glu 40	Trp Gly	Ser Pl	he Tyr T 45	yr Ser	Phe	
Lys Thr Glu 6	Gln Leu Ile	Thr Leu	Trp Val	Leu Pi		he Thr	Ile	
Val Gly Asn 6	Ser Val Val 70	Leu Phe	Ser Thr	Trp Ai 75	rg Arg L	ys Lys	Lys 80	
Ser Arg Met	Thr Phe Phe 85	Val Thr	Gln Leu 90	Ala Il	le Thr G	lu Lys 95	Gln	
Ala Arg Val 1	Leu Ile Val 100		Trp Ser 105	Leu Se		eu Phe 10	Ser	
Ile Pro Thr 1	Leu Ile Ile	Phe Gly 1	Lys Arg	Thr Le	eu Ser As 125	sn Gly	Glu	
Val Gln Cys 1	Frp Ala Leu	Trp Pro 1	Asp Asp	Ser Ty 14		ır Pro	Tyr	
Met Thr Ile V	Val Ala Phe 150	Leu Val 1		Ile Pr 155	o Leu Th	ır Ile	Ile 160	

Ser Ile Met Tyr Gly Ile Val Ile.Arg Thr Ile Trp Ile Lys Ser Lys

170

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165

Thr Tyr Glu Thr Val Ile Ser Asn Cys Ser Asp Gly Lys Leu Cys Ser 180 185 190

Ser Tyr Asn Arg Gly Leu Ile Ser Lys Ala Lys Ile Lys Ala Ile Lys 195 200 205

Tyr Ser Ile Ile Ile Ile Leu Ala Phe Ile Cys Cys Trp Ser Pro Tyr 210 215 220

Phe Leu Phe Asp Ile Leu Asp Asn Phe Asn Leu Leu Pro Asp Thr Gln 225 230 235 240

Glu Arg Phe Tyr Ala Ser Val Ile Ile Gln Asn Leu Pro Ala Leu Asn 245 250 255

Ser Ala Ile Asn Pro Leu Ile Tyr Cys Val Phe Ser Ser Ser Ile Ser 260 265 270

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atccactgga tggagttact tctttcttaa gtgaggaggc taagatctgg agtgacttct	180
ccccagattt ttgtatacct gactctgttt cagcatccgc ttcccaaaga atg cag Met Gln 1	236
tgt gaa gca gga gct tat gtg aga aga aac gca ggg aga cag ttc agt Cys Glu Ala Gly Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln Phe Ser 5 10 15	284
cac tgc aat ctt cat gcc cat cag ttt ctt gtg aga aga aaa caa gag His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys Gln Glu 20 25 30	332
ctc caa tct gtt aga tgg tat ttt gaa gca ggt ctt tgg gta aag gac Leu Gln Ser Val Arg Trp Tyr Phe Glu Ala Gly Leu Trp Val Lys Asp 35 40 45 50	380
acc tagacccagt gaaggtcatg gtgattatta ttggacaatg ggacatcact Thr	433
ctgctatttg aacaaataag actttttcct gacatgcatc tggaggcagg tcaaagctcc	493
aggecaacte caagtttetg atggggtete tagecaatgg aaggettett eteetteaat	553
tgcctgactc ttcaggactc ttaaatactg caaagtgaga aaatgagaca ggttgcactg	613
agggetgtta gecagacaga gtetegaaet ggaagteeat etagatgttt tgeataagag	673
aatggaaaca atctgtctgt gatttaggga catactctgg cagcaatatg ggaatacagt	733
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gacagcatgt catcattttc tagggactgt gtgttattgc atttttccta gggaagatct	913
tttctaggtc acctgctcct tcgctaaagc tctgaccaat ctagcttgct aacctgtgac	973
tocattttcc taagtootga gagagaaaaa cgotttgcag caaattatgo caggoatoot	1033
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aacttccaga aaaaagtcca tcccccactt ctctcagctg cctgccaacg ctggacacct	1333
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caaattagga ctctgtcact tcctgtgtac tgggcacttt gctgagtatg tggtttctca	1453
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<211> 51

<212> PRT

<213> Homo sapiens

<400> 17

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5 10 15

Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys
20 25 30

Gln Glu Leu Gln Ser Val Arg Trp Tyr Phe Glu Ala Gly Leu Trp Val 35 40 45

Lys Asp Thr 50

<210> 18

<211> 1407

<212> DNA

<213> Homo sapiens

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accatgeetg ecceettata ettgetgtte atagaattge aactgaaagt gaccatgagg 120

atccactgga tggagttact tctttcttaa gtgaggaggc taagatctga gttcttcaca 180

tctctctgta gataaaattt ccggtctggt ttcacattcc tctgtcagaa gaactttctt 240

taa tgt ttc tta aag tac agg tct gct gct tat gtg aga aga aac gca
Cys Phe Leu Lys Tyr Arg Ser Ala Ala Tyr Val Arg Arg Asn Ala
1 5 10 15

ggg aga cag ttc agt cac tgc aat ctt cat gcc cat cag ttt ctt gtg 336

Gly Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val 20 25 30	
aga aga aaa caa gag ctc caa tct gtt aga tgg tat ttt gaa gca ggt Arg Arg Lys Gln Glu Leu Gln Ser Val Arg Trp Tyr Phe Glu Ala Gly 35 40 45	384
ctt tgg gta aag gac acc tagacccagt gaaggtcatg gtgattatta Leu Trp Val Lys Asp Thr 50	432
ttggacaatg ggacatcact ctgctattaa gtgagaaaat gagacaggtt gcactgaggg	492
ctgttagcca gacagagtct cgaactggaa gtccatctag atgttttgca taagagaatg	552
gaaacaatct gtctgtgatt tagggacata ctctggcagc aatatgggaa tacagtttca	612
atcctcatta acaaaacagg tatgaaatac atatttattt agtaaggtgc cagctgtatg	672
aaaaatccat ttcttatttc ccataatgtt tctgaaatgt cttagcagtg catagagaca	732
gcatgtcatc attttctagg gactgtgtgt tattgcattt ttcctaggga agatcttttc	792
taggtcacct gctccttcgc taaagctctg accaatctag cttgctaacc tgtgactcca	852
ttttcctaag tcctgagaga gaaaaacgct ttgcagcaaa ttatgccagg catccttgtg	912
tctaaatgaa aaaaggaaaa agcctccttc cttccctctg ttgagaagtg cacggtccac	972
atatgcatgc acagcatata ctgtgagggt atttgcagtc ccttgggttg ctttgataac	1032
tggccaggtt gctgttctat ttttccacat tctattaatc ctcctacagg cagttattag	1092
gtattgagtg ctcacacacc cctggcatag tcaccacatg ccattagctc cagataaact	1152
tccagaaaaa agtccatccc ccacttctct cagctgcctg ccaacgctgg acaccttctc	1212
accaagccag caggacagag aaaagcctgg gctttaagat caaacaaaca cagcttcaaa	1272
ttaggactet gtcacttcct gtgtactggg cactttgctg agtatgtggt ttctcatctg	1332
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<211> 53

<212> PRT

<213> Homo sapiens

<400> 19

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Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg 20 25 30

Arg Lys Gln Glu Leu Gln Ser Val Arg Trp Tyr Phe Glu Ala Gly Leu 35 40 45

Trp Val Lys Asp Thr 50

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tgtttcagca tccgcttccc aaag	Met Gln Cys Glu	gca gga gct tat gtg 1 Ala Gly Ala Tyr Val 5	72
aga aga aac gca ggg aga ca Arg Arg Asn Ala Gly Arg Gl 10 15	ng ttc agt cac tgc .n Phe Ser His Cys . 20	aat ctt cat gcc cat 22 Asn Leu His Ala His 25	20
cag ttt ctt gtg aga aga aa Gln Phe Leu Val Arg Arg Ly 30	la caa gtg gat ata 's Gln Val Asp Ile 1 35	cac tgt tcc aag cag 20 His Cys Ser Lys Gln 40	68
cat gtg ttg aaa aga ttt gt His Val Leu Lys Arg Phe Va 45	c ttt tcc cca ttt a l Phe Ser Pro Phe A	aat ggt ctt ggt acc 31 Asn Gly Leu Gly Thr 55	16

341

<210> 21

Phe Leu Lys Asn 60

ttt ctc aaa aat tgaccatata tga

<211> 61

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<21	3>	Homo	sap	iens	i												
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Phe	Ser	His	Cys 20	Asn	Leu	His	Ala	His 25	Gln	Phe	Leu	Val	Arg 30	Arg	Lys		
Gln	Val	Asp 35	Ile	His	Cys	Ser	Lys 40	Gln	His	Val	Leu	Lys 45	Arg	Phe	Val		
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<210)> :	22															
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<212	> 1	ONA															
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tcat	cac	cat .	aacc	ctat	aa .a.	gtag	atga [.]	t at	tttt	acaa	cct	ccat	ttt	acag	atg Met 1	177
aag a Lys 1	aaa Lys	ctg Leu	aag Lys 5	cat His	aga Arg	cct Pro	gct Ala	tat Tyr 10	gtg Val	aga Arg	aga Arg	aac Asn	gca Ala 15	gly 999	aga Arg	225
cag t Gln I	tc Phe	agt Ser 20	cac His	tgc Cys	aat Asn	ctt Leu	cat His 25	gcc Ala	cat His	cag Gln	ttt Phe	ctt Leu 30	gtg Val	aga Arg	aga Arg	273
aaa c Lys G	aa 31n	gaa Glu	aac Asn	aag Lys	gac Asp	tgaa	atco	ac a	cago	jaagg	ıt gg	ıcagt	gaad	2		321

tccacagacg	gacctggacg	cctcaacact	cctggcctta	cctcccttgc	tgaacgtctc	383
				ctctgagctg		441
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gtgacactct	tccacctaga	gcattccgtc	tctcatcctc	tgccatgtga	cgctgggctt	561
ctttaacaaa	ttaatcccaa	gtgcaagaca	tttatttctt	ctgtacctaa	tgacctgagc	621
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<211> 39

<212> PRT

<213> Homo sapiens

<400> 23

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Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg 20 25 30

Arg Lys Gln Glu Asn Lys Asp 35

<210> 24

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<212> DNA

<213> Homo sapiens

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<221> CDS

<222> (175)..(366)

<400> 24

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aag aaa ctg aag cat aga cct gct tat gtg aga aga aac gca ggg aga Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly Arg 5 10 15	225
cag ttc agt cac tgc aat ctt cat gcc cat cag ttt ctt gtg aga aga Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg 20 25 30	273
aaa caa gac tgg caa cgc ctg ctt cct cct ctg agc tgt caa gta gga Lys Gln Asp Trp Gln Arg Leu Leu Pro Pro Leu Ser Cys Gln Val Gly 35 40 45	321
agt ccg ggc tgc tct gct aga aag aga agt cat gtg cag gag cac Ser Pro Gly Cys Ser Ala Arg Lys Arg Ser His Val Gln Glu His 50 55 60	366
tgaggcatcc caggtgtgac actettecae etagageatt eegtetetea teetetgeca	426
tgtagcaaac tgctatgcat ccttcagctg caagggattg aatgctatca acaaccatac	486
aagtggagaa gcagatgctt ccctagctga gcctcaggct ttttgatgga attgctacaa	546
cttggtgcat gcctgctcct aaaagaaata ctcaggaatt gtctcataaa gtcctcacct	606
actggcaaaa acaagatgtt ctactcccag gttgactttt tcaagcccca agatgttgag	666
tcagccattc tccaaggatc tcgatttcct tttaatggaa aataacatta aacaccaaat	726
ataageeteg etgteeeaca tgegtattgg ggacaagatg aaacetgett ecaggetaet	786
ttggcagcag aactgaaaaa ggcttttttt ccagatatat gatttctcat cgacagggtt	846
gcacagccct ctttattgtt cgtgtaaatg acacccttgg atctgaacaa tacacaccag	906
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<210> 25

<211> 64

<212> PRT

<213> Homo sapiens

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Gly Ser Pro Gly Cys Ser Ala Arg Lys Arg Ser His Val Gln Glu His

<210> 26

<211> 1068

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607

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ggcagcagaa	ctgaaaaagg	cttttttcc	agatatatga	tttctcatcg	acagggttgc	967
acagccctct	ttattgttcg	tgtaaatgac	acccttggat	ctgaacaata	cacaccagga	1027
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<211> 64

<212> PRT

<213> Homo sapiens

<400> 27

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Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg

Arg Lys Gln Asp Trp Gln Arg Leu Leu Pro Pro Leu Ser Cys Gln Val 35 40 45

Gly Ser Pro Gly Cys Ser Ala Arg Lys Arg Ser His Val Gln Glu His 50 55 60

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<211> 799

<212> DNA

<213> Homo sapiens

<220>

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tcatcaccat aaccctatgg ggtagatgat atttttacaa cctccatttt acag atg Met 1	177
aag aaa ctg aag cat aga cct gct tat gtg aga aga aac gca ggg aga Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly Arg 5 10 15	225
cag ttc agt cac tgc aat ctt cat gcc cat cag ttt ctt gtg aga aga Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg 20 25 30	273
aaa caa agc aaa ctg cta tgc atc ctt cag ctg caa ggg att gaa tgc Lys Gln Ser Lys Leu Leu Cys Ile Leu Gln Leu Gln Gly Ile Glu Cys 35 40 45	321
tat caa caa cca tac aag tgg aga agc aga tgc ttc cct agc Tyr Gln Gln Pro Tyr Lys Trp Arg Ser Arg Cys Phe Pro Ser 50 55	363
tgagcctcag gctttttgat ggaattgcta caacttggtg catgcctgct cctaaaagaa	423
atactcagga attgtctcat aaagtcctca cctactggca aaaacaagat gttctactcc	483
caggttgact ttttcaagcc ccaagatgtt gagtcagcca ttctccaagg atctcgattt	543
ccttttaatg gaaaataaca ttaaacacca aatataagcc tcgctgtccc acatgcgtat	603
tggggacaag atgaaacctg cttccaggct actttggcag cagaactgaa aaaggctttt	663
tttccagata tatgatttct catcgacagg gttgcacage cctctttatt gttcgtgtaa	723
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<210> 29

<211> 63

<212> PRT

<213> Homo sapiens

<400> 29

Met Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly

1 10 15

Arg	Gln	Phe	Ser	His	Cys	Asn	Leu	His	Ala	His	Gln	Phe	T.eu	ו בעו	Δrα

		orn the ned var Arg
20	25	3.0
		30

Arg Lys Gln Ser Lys Leu Leu Cys Ile Leu Gln Leu Gln Gly Ile Glu 35 40 45

Cys Tyr Gln Gln Pro Tyr Lys Trp Arg Ser Arg Cys Phe Pro Ser 50 55 60

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<211> 834

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (30)..(251)

<400> 30

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aga Arg	ctt Leu 10	aag Lys	act Thr	ttg Leu	Gly 999	gac Asp 15	tac Tyr	tgg Trp	aaa Lys	gct Ala	tat Tyr 20	gtg Val	aga Arg	aga Arg	aac Asn	101
gca Ala 25	GJ ^A aaa	aga Arg	cag Gln	ttc Phe	agt Ser 30	cac His	tgc Cys	aat Asn	ctt Leu	cat His 35	gcc Ala	cat His	cag Gln	ttt Phe	ctt Leu 40	149
gtg Val	aga Arg	aga Arg	aaa Lys	caa Gln 45	gac Asp	tgg Trp	caa Gln	cgc Arg	ctg Leu 50	ctt Leu	cct Pro	cct Pro	ctg Leu	agc Ser 55	tgt Cys	197
caa Gln	gta Val	gga Gly	agt Ser 60	ccg Pro	ggc Gly	tgc Cys	tct Ser	gct Ala 65	aga Arg	aag Lys	aga Arg	agt Ser	cat His 70	gtg Val	cag Gln	245
gag Glu	cac His	tgag	gcat	cc c	aggt	gtga	c ac	tctt	ccac	cta	.gagc	att	ccgt	ctct	ca	301

tcctctgcca tgtagcaaac tgctatgcat ccttcagctg caagggattg aatgctatca

acaaccatac aagtggagaa gcagatgctt ccctagctga gcctcaggct ttttgatgga

attgctacaa cttggtgcat gcctgctcct aaaagaaata ctcaggaatt gtctcataaa

361

421

481

WO 2004/056866 PCT/FI2003/000973 105/111

gtcctcacct	actggcaaaa	acaagatgtt	ctactcccag	gttgactttt	tcaagcccca	543
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cgacagggtt	gcacagccct	ctttattgtt	cgtgtaaatg	acacccttgg	atctgaacaa	781
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<210> 31

<211> 74

<212> PRT

<213> Homo sapiens

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Met Pro Leu Asp Leu Met Leu Glu Arg Leu Lys Thr Leu Gly Asp Tyr 1 5 10 15

Trp Lys Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln Phe Ser His Cys 20 25 30

Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys Gln Asp Trp Gln 35 40 45

Arg Leu Leu Pro Pro Leu Ser Cys Gln Val Gly Ser Pro Gly Cys Ser 50 55 60

Ala Arg Lys Arg Ser His Val Gln Glu His 65 70

<210> 32

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<220>

<221> CDS

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tcatcaccat aaccctatgg ggtagatgat atttttacaa cctccatttt acag atg Met 1	177
aag aaa ctg aag cat aga cct gct tat gtg aga aga aac gca ggg aga Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly Arg 5 10 15	225
cag ttc agt cac tgc aat ctt cat gcc cat cag ttt ctt gtg aga aga Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg 20 25 30	273
aaa caa gac tgg caa cgc ctg ctt cct cct ctg agc tgt caa gta gga Lys Gln Asp Trp Gln Arg Leu Leu Pro Pro Leu Ser Cys Gln Val Gly 35 40 45	321
agt ccg ggc tgc tct gct aga aag aga agt cat gtg cag gag cac Ser Pro Gly Cys Ser Ala Arg Lys Arg Ser His Val Gln Glu His 50 55 60	366
tgaggcatcc caggtgtgac actettecae etagagcatt cegtetetca teetetgeca	426
tgtgccatgt tttgaaccac tagattagag ggtcaagcaa tttcttggaa ttttactctg	486
aattetaegt agaceatttt catgtgtata eeteetetga gteaeeetea ggtagggaea	546
tttt	550

<210> 33

<211> 64

<212> PRT

<213> Homo sapiens

<400> 33

Met Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly
1 10 15

Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg 20 25 30

Arg Lys Gln Asp Trp Gln Arg Leu Leu Pro Pro Leu Ser Cys Gln Val 35 40 45

Gly Ser Pro Gly Cys Ser . 50	Ala Arg Lys Arg Ser 55	His Val Gln Glu His
<210> 34		
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<212> DNA		
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·		
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aaagtgccta ccacatgcta acc	cactgotg caggoacttt	ctatagaaga actaatttaa 120
tcatcaccat aaccctatgg ggt		Met 1
aag aaa ctg aag cat aga c Lys Lys Leu Lys His Arg P 5	ct gct tat gtg aga Pro Ala Tyr Val Arg 10	aga aac gca ggg aga 225 Arg Asn Ala Gly Arg 15
cag ttc agt cac tgc aat c Gln Phe Ser His Cys Asn L 20	tt cat gcc cat cag eu His Ala His Gln 25	ttt ctt gtg aga aga 273 Phe Leu Val Arg Arg 30
aaa caa gtg gat ata cac tg Lys Gln Val Asp Ile His C 35 40	ys Ser Lys Gln His	Val Leu Lys Arg Phe
gtc ttt tcc cca ttt aat gg Val Phe Ser Pro Phe Asn G 50 55	gt ctt ggt acc ttt ly Leu Gly Thr Phe 60	ctc aaa aat 363 Leu Lys Asn
tgaccatata tga		376
<210> 35		
<211> 63		
<212> PRT		
<213> Homo sapiens		

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Met Lys Lys Leu Lys His Arg Pro Ala Tyr Val Arg Arg Asn Ala Gly 1 5 10 15

Arg Gln Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg

Arg Lys Gln Val Asp Ile His Cys Ser Lys Gln His Val Leu Lys Arg 35 40 45

Phe Val Phe Ser Pro Phe Asn Gly Leu Gly Thr Phe Leu Lys Asn 50 55 60

<210> 36

<211> 369

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (146)..(247)

<400> 36

cag ttt ctt gtg aga aga aaa caa gtt taggaaaact tcctacacct 267 Gln Phe Leu Val Arg Arg Lys Gln Val

tctttgttgg gatgttctct ggactaatga ctccaggcga gaccaccgtt gatcatgaac 327

tcactttgaa acagaagctg ggttggtaag actggagcta ct 369

<210> 37

<211> 34

<212> PRT

<213> Homo sapiens

<400> 37

Met Gln Cys Glu Ala Gly Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln 1 5 10 15

Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys

Gln Val

<210> 38

<211> 512

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (62)..(172)

<400> 38

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a atg cag tgt gaa gca gga gct tat gtg aga aga aac gca ggg aga cag

Met Gln Cys Glu Ala Gly Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln

1 1 5 10 15

ttc agt cac tgc aat ctt cat gcc cat cag ttt ctt gtg aga aga aaa 157 Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys 20 25 30

caa gaa aac aag gac tgaaatccac acaggaaggt ggcagtgaac tccacagacg 212 Gln Glu Asn Lys Asp

gacctggacg cctcaacact cctggcctta cctcccttgc tgaacgtctc aagtttctct 272

gcgttcaggt aatgtatagg agggttatga gggcagagaa ttcctaagct cattagtaaa 332

ttgctcttca gaaaagtgct ttgaagcaaa gctaatttcc tttcccaata tgagaagatt 392

tggccctacc agaaaaagga aatgatttga atgtgcgcca aaaaatatgt tttctttctt 452 ttctttgttg aacactcatc gggagttact cttattagtt ccgcattttt attgccattt 512 <210> 39 <211> 37 <212> PRT

<400> 39

Met Gln Cys Glu Ala Gly Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln 10

Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys 25

Gln Glu Asn Lys Asp 35

<213> Homo sapiens

<210> 40

<211> 830

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

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40

Pro Gly Cys	s Ser Ala A	ga aag aga rg Lys Arg 55	agt cat gtg Ser His Val	cag gag cac Gln Glu His 60	24
tgaggcatcc	caggtgtgac	actcttccac	ctagagcatt	ccgtctctca tcctctgcca	307
tgtagcaaac	tgctatgcat	ccttcagctg	caagggattg	aatgctatca acaaccatac	367
aagtggagaa	gcagatgctt	ccctagctga	gcctcaggct	ttttgatgga attgctacaa	427
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gcacagccct	ctttattgtt	cgtgtaaatg	acacccttgg	atctgaacaa tacacaccag	787
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<210> 41

<211> 62

<212> PRT

<213> Homo sapiens

<400> 41

Met Gln Cys Glu Ala Gly Ala Tyr Val Arg Arg Asn Ala Gly Arg Gln 1 5 10 15

Phe Ser His Cys Asn Leu His Ala His Gln Phe Leu Val Arg Arg Lys 20 25 30

Gln Asp Trp Gln Arg Leu Leu Pro Pro Leu Ser Cys Gln Val Gly Ser 35 40 45

Pro Gly Cys Ser Ala Arg Lys Arg Ser His Val Gln Glu His 50 55 60